

DNA Analyst Training Laboratory Training Manual

Protocol 2.17 Hemastix Presumptive Test for Blood



This laboratory protocol (or part thereof) has been provided as an example of a laboratory SOP, courtesy of the National Forensic Science Technology Center. It has been included for training and example purposes only.

PRESIDENT'S
DNA
INITIATIVE



INTRODUCTION

Hemastix are reagent strips originally designed for use in testing for blood in urine. This quick and easy test has been found to be applicable as a presumptive test for the presence of blood. The test strips contain diisopropylbenzene dihydroperoxide and 3,3',5,5'-tetramethylbenzidine. The test is based on the peroxidase-like activity of hemoglobin which has the ability to cleave oxygen molecules from H_2O_2 and catalyzes the reaction from the reduced colorless form of 3,3',5,5'-tetramethylbenzidine to the oxidized colored form. The resulting color ranges from orange to green. Very high concentrations of blood may cause the color development to continue to blue.

SAFETY CONSIDERATIONS

Refer to the Laboratory Safety Manual(s)

PREPARATIONS

Deionized Water
Hemastix

INSTRUMENTATION

- Timer

MINIMUM STANDARDS & CONTROLS

- Positive control (known blood stain)
- Negative control

PROCEDURE OR ANALYSIS

1. Apply 1 drop of deionized water to the pad end of the test strip
2. Rub the damp pad onto the stain in question
3. Note color change within 60 seconds.
4. A color change to orange through green or blue indicates a positive result. No color change indicates a negative result. A negative result means there is no blood present or is below the limit of detection of the test.

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